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A PERSONAL WORD

When I began to grow American Hollies more than 40 years ago, nurserymen raised only a few and little was written about the culture of this wonderful native. I had to learn the hard way, through practical experience. Almost from the very beginning certain factors became progressively more evident, perhaps the most important, that my stock was not as hardy as desired.

Southern material, although fine looking, did not do well. Hollies brought in from the swamps and woodlands of New Jersey and Massachusetts, as a whole, did little better. You see, my Hollies have to be able to "take it," for I grow everything in open fields exposed to full sun and wind.

Success started when I found that Hollies transplanted to my fields from exposed places did much better than most of those from protected swamps.

The immediate result was that my work seemed much harder because only a few plants were available where before I had had thousands to choose from. Slowly, year by year, however, my stock has grown stronger and more hardy. This is proven by the fact that Hollies I have sold are doing well with proper care way up north in Minn., Wis., Mich., N. Y., Vermont, N. H., Maine, Nova Scotia, Canada and in hundreds of other far northern places where Holly never grew before.

My lifetime hobby—the hunt for better American Hollies—grows in intensity with the years, but now instead of transplanting specimens to my Holly Farm, I bring back cuttings. Each year many thousands are rooted.

Real advances have been made in the selection, propagation and growing of Holly trees. Most people now buy by name the same as they purchase roses and other plants.

If interested write me for I believe I can help. Remember, the thing that counts most is hardiness.

A brief description of some of my named Hollies appears on the following pages. Each differs from the other, but all can be described with just one word—Hardy.

EARLE DILATUSH

Holly Specialist

ROBBINSVILLE, NEW JERSEY

(On ROUTE 25, Near Trenton)

Between Hightstown and Bordentown

CARDINAL

ILEX OPACA

See Front Cover—Actual Photograph, Colored

CARDINAL has quite an ordinary leaf and without berries would hardly merit a name, yet it is absolutely my most valuable Holly.

Berries! No Holly has ever been propagated that bears like CARDINAL. They weigh the limbs down and even when green are more prominent than the leaves. In winter you hardly see the leaves. At a distance it shows as a red mass—hence its name. People seeing it the first time hardly believe it is a Holly until they examine closely.

A slow, compact grower, it is not a dwarf but fits in wonderfully where space is limited. Many people would like to have a Holly but feel they haven't the room for it. This is just where CARDINAL fits in. It does not overgrow, but has so many berries that it somehow always looks larger than it really is. Bears younger, too. Plants two feet high often have as many berries as most Hollies of ten feet.

A few months ago a lady told me she would like CARDINAL, but just could not find room for a companion. I learned she was friendly with her neighbor, so suggested she buy a male Holly and present it to the neighbor as a gift. The idea pleased and a sale was made on the spot. Since then I have sold the plan to others who have very limited space.

CARDINAL is very adaptable. It has been sold to go along the seashore, in the mountains, in gardens big and little, and always it proceeds to grow slowly, shape up well and **bear berries**. Makes very little propagating wood so is scarce. The demand for this wonderful Holly is always way ahead of the supply.

Hardy, the mother tree came from Massachusetts.

More Hollies have been planted the last five years than during the preceding 50 years. Better nursery-grown stock has done much to further this.



BOUNTIFUL
Ilex Opaca

BOUNTIFUL

ILEX OPACA

Actual Photograph, Opposite.

Ever travel miles to see perfection in something and then stumble over the real thing right at home? Some time ago I found a Holly—but let's start at the beginning.

The crusade to save Holly in the wild in New Jersey by depriving ourselves of this beautiful symbol of Christmas, while praiseworthy, simply does not work, and our native trees are rapidly disappearing.

The much better way of planting Hollies around our homes is destined to bring it back, and how lucky we are that while having this beautiful tree to look at all the year, we make it more attractive by pruning hard at Christmas! Let's see how it worked out on the tree I started to tell you about.

BOUNTIFUL is 61 years old, 28 feet high, and 22 feet wide. Its former owners say it has yielded the equivalent of six standard boxes of cut Holly annually for the last 21 years and for 20 years before that an average of four boxes a year. The money received has amounted to the amazing sum of \$800.00. Remarkable, too, is the fact that BOUNTIFUL has never received fertilizer or cultivation of any kind. The owners know little or nothing about pruning and say they have never given a thought to tree form—have just cut the ends of the branches that were loaded with berries and sold to persons eager to buy. The branches that lie on the ground take root very easily and the owners have given away or sold dozens of trees, grown this way.

The tree is the most perfect example of a compact, formal Holly I have ever seen. It is not down in Virginia or North Carolina but stands at Beverly, N. J., only a few miles from my home. And I have spent whole vacations seeking "the" Holly!

Hollies are easier grown than many of our so-called hardy evergreens. Buy nursery-grown stock, plant carefully, use Oak Leafmold.



MERRY CHRISTMAS

Ilex Opaca

MERRY CHRISTMAS

ILEX OPACA

Actual Photograph, Opposite.

MERRY CHRISTMAS is the best all-round Holly I know. Very hardy, with foliage and berries of good color, it grows rapidly but not as compact as some. I almost cried three years ago when a frightened horse pulling a cultivator past this tree broke a half dozen large limbs off close to the trunk. Today the tree has grown out until it is almost perfect in shape again. This ability to fill out and shape up quickly is all too uncommon. One of my propagators tells me it is the only Holly he has ever rooted 100% in quantity.

I found this Holly some years ago near Bayville, N. J. With my men, I was tying up and digging a hundred large Hollies for a hedge. About noon a doe suddenly jumped from its bed way in under one of the trees we had been working around all the morning. We were about as frightened as the deer. It doesn't make sense that the deer could have remained hidden from us all the morning, but it did.

MERRY CHRISTMAS was in this group and, being outstanding, was brought to my farm. Later it was transplanted high up in the Catskill Mountains, above Eldred, N. Y. No doubt it feels right at home, for there are deer all around it, so many of them that it is fenced in to save it from being eaten. It's really cold there, as ice froze 32 inches on a lake two hundred feet away, last winter.

However, when I got cuttings this summer I found MERRY CHRISTMAS looking better than it did in the "deer" woods in Jersey. This Holly, with wonderful foliage and bright berries, far from its natural habitat, delights and thrills all who see it. Here is a proven tree that can take it. You cannot buy a hardier, better Holly anywhere.

Holly hedges keep dogs and trespassers out. Can be grown in sun or shade. Permanent, will live a hundred years.

OLD LEATHER LEAF

My favorite male Tree. Old leatherleaf has stood without flinching before the worst wind and weather that the elements have had to offer. Hollies nearby it have often suffered from sleet or gale winds during the past sixty years. Its strength lies in the bushy way it grows and in the thick leathery quality of its leaves. The foliage is a very superior dark green. For many years experimental work has been done to improve the female of the specie, but the male has been left to its own. Wild Hollies were often used as pollinators. This particular tree has done more than any other to awaken interest in male Hollies as landscape specimens.

BLACK BEAUTY

The male with the darkest green foliage. To those familiar with Holly, well fed trees of this variety seem almost unnaturally dark—a black-green that also has the advantage of being glossy, usually for a period extending through December. This gloss seems to be an overflowing of health that follows the hardening period of the late summer growth. Very cold weather, when it comes, tends to dull the gloss. Fully hardy into New England, Black Beauty grows quite upright and is generally very dense. It is not a fast grower.

OLD HALE AND HEARTY

Our largest leaf and most vigorous growing male. Old Hale and Hearty surely does have a large leaf. Occasionally, near the center of the tree, where "suckers" sometimes develop in full shade, we will find a five-inch leaf. While this by no means is the expected size it may be said in all fairness that the leaves on this tree are larger than the average of leaves on most trees. Growth is quite rapid, so rapid at times that the young are a bit thin in appearance. Old Hale and Hearty may be pruned as the parent is, to a beautifully dense specimen, or may be left lightly pruned to form a tall, loose, informal tree.

TORCHBEARER

A Holly that holds its branches stiffly about it like a man with many arms holding many torches. The berries are borne in great clusters on a mature tree, and from a distance these clusters look for all the world like torches. Torchbearer grows quite rapidly and usually matures to a great broad specimen that is quite impressive.

OLD FAITHFUL

A truly reliable bearer. We have never known the parent tree to be without a heavy crop of berries. An extremely dense, columnar tree with small delicate leaves that are surprisingly tough. The young of this tree will sometimes bear when only two years old and often bear when only three years old. Old Faithful branches well when young and does not grow in an awkward manner. It is a favorite among nurserymen who wish to sell the trees as small specimens at plant markets, etc. The foliage is a good green. The tree seems to be liked by almost everyone.

CHRISTMAS SPRAY

One of the best Hollies to plant in Holly orchards. Liked by the commercial grower because its sprays grow long and lie flat in the box. The

branches often grow in layers that droop downward from the weight of the berries as Christmas approaches. A large leaf and berry with good dark-green foliage and vigorous habit of growth. The young plants often grow openly and informally and should be pruned to shape while growing. Christmas Spray matures sufficiently for the cutting of long sprays when about sixteen years of age.

CHRISTMAS BOUQUET

Among the people who stop here for cut Holly at Christmas, there are always a few who wish sprays for a vase or an upright arrangement. It is more of a problem than it sounds in that most branches have a definite "back" to them and do not look good when stood up in a vase. Christmas Bouquet, however, has proved a lifesaver for such uses. Its branches seem clothed in leaves all the way around and look their best when stood upright. It would seem a useful tree in a Holly orchard. Its foliage is exceptionally dark-green as compared to the average. Its berries are a dark but bright-red. It is a rapid and informal grower when young and requires pruning for shape.

SPRIG

A sprightly Holly that always seems to stand out from its neighbors. 'Tis a bright, cheerful tree that bears heavily. Sprig grows in a loose bushy manner and every branch and stem points upward somewhat like a broom stood on end. Every branch tip on the tree is a perfectly balanced little "sprig" of Holly berries and leaves, thus its name. A wonderful tree for the Holly orchardist who wishes to sell "tips." The number of tips per pound of foliage is greater on "Sprig" than on any other Holly we know.

PERFECTION

The tree that I would pick if I wished to make up a corsage. This Holly has a bright, waxy berry and a perfectly proportioned leaf. Its habit of growth is upright and moderately dense. Its height will as a rule be about a third more than its width at the base. It is almost impossible to pick the perfect Holly, because some are so very useful for special purposes. But this Holly has been called "Perfection" because its leaves and berries have pleased our eye more than any other we know.

JEKYLL

An unusual double Holly; originally planted as a demonstration tree. One-half of the tree (which we call "Hyde") is a native wild Holly with wishy-washy berries and dull light-green foliage. The other half, "Jekyll," an improved cultivated variety has exceptionally dark-green foliage that is glossy in early winter. Its berry is a lightly waxed bright-red. Jekyll grows rather informally but makes a fine moderately fast growing specimen. Hyde is guaranteed not to show himself if you buy Jekyll.

CUP-LEAF

A large leaf that cups downward, thus its name. It is a Merry Christmas type of tree, growing loosely and rapidly and requiring some pruning when young. The foliage is rather unique and is most evident after the tree is a few years old. The foliage is a very dark-green and seems to be exceptionally tolerant of poor ground. That is to say that where many Hollies will have yellowish foliage when planted in very poor soil, Cup-

Leaf will stay comparatively green. The berry is rather large and waxy on Cup-Leaf and is on a longer stem than most berries.

SUNSET GLOW

Whenever I walk near this tree late of a sunny afternoon, I think to myself that it is the most beautiful Holly I have ever seen. Something about the color of its berries and the color of the late sun seem to go together and to accentuate each other. The berry is a light bright-red with a finish that is dull and yet which catches the light; as though it were dipped in a very fine powder. The leaf is a good green and the foliage compact. The growth habit is a bit slower than average and proportionately dense.

ELFIN

When one looks into a mass of leaves on this tree, he will often remark "its leaves look rakish." And truly many leaves on this tree have spines that are turned at rakish angles. An attractive leaf and berry that stand out from the average.

BIG RED

An experimental Holly with a big dark-green leaf that stays green even under adverse conditions that would cause most other Hollies to develop yellowish-green foliage. The berry is larger than usual, but as the tree has a very dense habit, many berries are often hidden by the foliage.

CHRISTMAS HEDGE

Our best hedge Holly. A good green leaf, a showy berry, and a bushy habit of growth that adapts well to hedge shearing. A number of other hedge varieties are available but we do not think that they measure up to the Christmas Hedge. Cardinal is often used for hedge work, and shears more easily to a narrow hedge than does Christmas Hedge. Where a fast growing hedge is desired, Bountiful is perhaps the best.

EUROPEAN AND ORIENTAL HOLLIES

Ilex Aquafolium—The English Holly of literature, of which there are hundreds of variations. Where it grows well, this Holly has a wonderful dark-green foliage and a famously attractive berry. Unfortunately, it does not do well in much of the East unless given wind protection and planted in sheltered and often partially shaded locations. It likes lots of leafmold around its roots and plenty of water. Will grow along the coast from North Carolina to Massachusetts and in the warmer inland valleys and lake regions.

Available in small sizes are:

Ilex Aquafolium female.

Ilex Aquafolium male.

Ilex Aquafolium Wilsonii—large roundish leaf, big berry.

Ilex Aquafolium Green Maid—An Oregon improved development.

Ilex Aquafolium Ferox—The hedgehog Holly. A rare novelty that actually has spines on top of the leaf as well as at the sides. A few silvered margined ones are propagated each year for discerning collectors.

Ilex Cornuta—The horned Holly of China.

Available in male and female and also in the improved female strain so often seen in the South. *Ilex Cornuta* Burfordii. A lover of hot, dry climates, the Horned Holly survives below zero temperatures only when favored with a sunny wind protected location.

Ilex Pernyii—The tiny leaved Holly of the Orient. Prized by collectors because of its miniature Holly-shaped leaves. A lanky grower that requires constant shearing if a bushy shape is desired. Berries are borne underside of the foliage. An improved strain is available—*Ilex Pernyii* Vietchii, slightly larger leaves, bushy habit, showier berries. Hardy; grows well over much of the nation where American Holly will grow.

Ilex Crenata Convexa—The box leaved Holly. Used most often for borders or hedges this Holly has foliage that looks more like boxwood than Holly. One of the hardiest of the un-Holly-like Japanese Hollies, it will stand both heat and cold and grows most anywhere that American Holly will grow.

Ilex Verticillata—Often known as "Winterberry." The only Holly in this list that sheds its leaves each winter. Primarily used as a birdfood, these are available in male and female—larger bearing aged shrubs only. This Holly is a native of America. Red berries. Very hardy; likes wet places.

Ilex Glabra—Inkberry or Gallberry—A native American black-berried evergreen Holly wonderfully adapted for hedges or foundation plantings. Thickly bushy habit, quite rapid growth, fully hardy where American Holly will grow. Very popular. Large bushy shrubs available.



OLD HEAVY BERRY
Иlex Opaca

OLD HEAVY BERRY

ILEX OPACA

Actual Photograph, Opposite.

People often point out old landmarks in Burlington, N. J., settled in 1677. Seldom shown, but of more interest to me, are a few old Hollies scattered about the country nearby. Years ago one especially worthwhile was called OLD HEAVY BERRY by the boys of the neighborhood.

Sturdy as an oak, this Holly has lived through much because of those boys. When quite young, the whole top was cut off and carried away one Christmas Eve. Several times it has had all its limbs cut back to stubs, the last time only six years ago. Many of our fine old Hollies have been destroyed by ruthless cutting, but this old tree possesses so much vigor that it seems hardly to have been hurt at all—it just keeps on growing.

When I first saw OLD HEAVY BERRY a dozen years ago, I immediately felt that it had more character than any Holly I had ever seen. Since then I have stood under it many, many times and its beauty grows on me. It has large, heavy dark leaves. Berries seem to form on every twig. The structure, more like oak than Holly, is most interesting and when I get cuttings I just climb up, for all limbs will bear me (194 pounds).

My first effort to buy met with a decided "No!" and as the years went by I tried so many times that the owner finally said: "You could grow a Holly in less time than you have bothered me about this one." Perseverance won and I bought what has proved, through the years, to be one of the best Hollies in America.

Help save Holly! Do not buy branches at Christmas that have been torn from native trees. Grow your own!



CAPE COD DWARF

ILEX OPACA (Actual Photograph, Above)

Along the Atlantic seaboard, notably at Cape Hatteras, N. C., Love Lady (near Barnegat Lighthouse, N. J.), and Cape Cod, Mass., are to be found Hollies quite different from the formal BOUNTIFUL described on page three.

These Hollies, rooted deep in the seashore sand, have not been allowed by nature to mature normally. Year by year, heavy storm winds from the ocean have whipped sand through these trees and literally cut them off. Hollies a century old are often not over 10 feet tall. What wonderful trees, each with a grotesque beauty all its own! Transplanted in our gardens they would be priceless, but they cannot be safely moved from their sandy habitat. Often sand drifts over them year after year until their roots are a dozen feet under ground. Cuttings from them have proved quite unsatisfactory for, while the resulting trees have been stunted like the parents, they are not really worth while until they have had time to mature (25-50 years).

CAPE COD DWARF is different. The parent tree found on Cape Cod, perhaps a hundred years old, was not unlike a large Pfitzer Juniper. It went the way of countless other trees in the hurricane of 1939—washed completely away. I am now taking cuttings from a daughter of this tree, two feet high and six feet wide, age eleven years.

A distinct novelty offered nowhere else, CAPE COD DWARF is well worth while.

CANARY

Canary, a new yellow-berried Holly, has bright yellow berries, dark green foliage, and is the hardiest of the yellow-berried Hollies. The parent tree, now destroyed, stood for many years high up in the Great Smoky Mountains.

A lady living near this tree sent me a few branches several years ago. I grew a half dozen small trees from the cuttings, but thought little about them until one planted in my yard bore fruit. The berries hold their color all Winter and plants placed among red-berried Hollies stand out in strong contrast.

So many folks enjoying the Hollies in our Holly orchard spied the little tree that Mrs. Dilatush and I decided to drive down to the Great Smokies in our pick-up and bring home a lot of cuttings to propagate.

We found the lady we were seeking easily and then met with a series of disappointments. Everybody seemed to know of the Holly in question, but no one would take me to it. Their excuses seemed quite legitimate, yet I could not but feel that I was put off—not welcome.

Finally an old trapper said he would help if I would give him ten dollars. I agreed, and my wife waited in the pick-up, alongside the cabin, while I followed my guide. We walked what seemed miles up hill and down, and through thickets of rhododendrons which were at times almost impassable. We passed several little corn fields that interested me for I could see no way in which corn could be transported to the highway. When questioned, my guide said that real farmers like myself knew little or nothing of the hardships of the hill people.

I was completely tired out when we reached our goal, but I wish I had words to describe the thrill of my first sight of the Holly the natives all seemed to know but which I learned afterwards, few outsiders had seen.

It stood on a small bluff at the junction of a dry gulch and a rushing mountain stream. Probably 100 years old, it was as straight as a tulip poplar, and covered with berries. And about 15 feet away, there was a red-berried Holly even larger. The limbs of the two trees interlaced so that masses of red berries were mingled with the bright yellow ones.

Those two Hollies growing side by side, deep in the forest, made a greater impression on me than any others I have yet seen. I marvel every time I think of the wondrous way nature works. Branches of each tree extended way into the other, yet the same pollen, brought by bees, made yellow berries on one branch and red on the other.

With arms full of yellow-berried branches we started back to the truck. The distance seemed even farther than the trip down, and somehow I felt, most of the time that we were walking in other than the direction of the cabin. I could see by the sun that some of the time we were even going back in the direction of the tree.

When I got the Holly packed in wet burlap and was ready to depart, the old fellow asked just one question. He wanted to know if I felt I could find the tree again. My answer, a plain "No," seemed to please him, but after driving only a few yards down the road, we topped a little hill, and there less than a half a mile away, I saw the bluff where the Holly stood.

Probably you have guessed already what I was so slow in realizing. Everybody there knew that yellow-berried Holly because it marked the exact location of a still. I guess it is a good thing I was so dumb, for I never would have taken the chances I did if I had realized what was under the roots of the parent tree of the Holly named "Canary."

AMERICAN HOLLY

SELECTING THE PLACE TO PLANT YOUR HOLLY

American Holly is most easily grown along the coast and up the great river valleys. With a bit of wind protection and care, it may be grown on the plains and in the northern forest regions. Holly grows naturally almost a mile high in the mountains. Here Nature has made it as much at home as on the seacoast. Holly does its best high in the mountains when planted in natural shelter, such as a hemlock grove and when its roots are covered with a thick layer of leafmold. Such ravines are its natural habitat, with lots of water available to the roots from seepage in the rock layers.

Thus the success of growing holly in very cold or extreme climates is to make it at home by shelter from wind, by natural soil (leafmold) and by watering when needed.

Holly does not like limestone or alkali soils, but will grow in them if leafmold is added each year to sour the soil.

Hollies should not be planted too near big maples or other large shade trees that draw large amounts of water and nutriment from the soil surrounding them. Hollies planted closer than twenty feet from large shade trees often look sickly because their roots are unsuccessfully trying to compete with the larger trees.

PLANTING THE HOLLY

Hollies should be planted in soil that grows other things well and should be planted within reach of your hose.

It is wise to dig a large hole, one of at least twice the size and depth of the root ball. The earth which has been dug from the hole should be mixed with Oak Leafmold, or any sour leafmold that is well crumbled.

Measure the depth of the root ball and fill the hole with the leafmold-soil mixture until, by your yardstick, the top of the ball would be an inch or so below the original ground surface when it is set in.

Place the ball in the hole and fill up part way with the earth leafmold mixture. Water well and fill the remainder of the hole with the leafmold earth mixture. After the earth has settled around the tree, fill it to level again with pure Oak Leafmold.

With what is left of the soil mixture, form a continuous dike a few inches high just under the outermost tips of the branches, all the way around the tree. This dike will allow you to put many gallons of water on the tree without its running off. Soaking the tree with gallons and gallons of water once in ten days is worth far more than a sprinkling twice a day.

Many people leave a low dike around their hollies permanently. It is almost invisible if grassed and kept just under the branches.

FERTILIZING THE HOLLY

To be avoided are garden or commercial fertilizers, lime, bone meal, very fresh manure. A sour base fertilizer should be used for Holly. Most Holly growers sell such fertilizers especially for Holly. You can make your own much more economically if the ingredients are easy for you to obtain. One-half of your home mixture should be composed of tobacco stems or dust. The other half may be cottonseed meal, castor pomace or old cow manure.

The following directions apply only to this homemade mixture: Applications should be made early spring and early fall. A handful for babies, a quart for knee high trees, a gallon for head high Hollies and a bucket full for trees you look up at. Double these amounts may be used for trees that have not had fertilizer for a long time.

The fertilizer should be spread around the tree evenly on the ground under the branches. If the surface of the ground is hard and packed, it would be wise to spread a layer of Oak Leafmold as a mulch on top of the fertilizer. This will keep moisture in and heat and cold out.

PRUNING THE HOLLY

Large Hollies are benefited greatly by cutting of greens for Christmas. Holly that is in good health evidently has a good root system that can easily support its branches. If a few branches are cut off, the root therefore has less top to support and when it sends out new foliage next spring, that new foliage will be all the more vigorous.

Hollies which have been recently dug from a good nursery should look very little different after the moving than before. Hollies improperly dug or Hollies which have had many roots cut in the digging will in many cases look much worse the year following moving than they did previous to the moving. This is because there is insufficient root to maintain the top foliage. By pruning such sick Hollies heavily, the balance is maintained between "cut root" and "pruned top." Hollies thus pruned will look much better the following year and will put out vigorous new growth.

Holly is unique among evergreens in that there is no limit to the extent which it may be pruned; it will sprout anew. Hollies cut to the ground will sprout again from the base. If your Holly needs pruning, because it is thin, or because it is not "thrifty," do not hesitate to prune. But do keep an eye on the framework of the tree as you prune so that you will end up with the shape you wish. You cannot glue 'em back on, y' know.

Pruning also helps thin trees to thicken their foliage. Whenever a twig or branch is cut, several new branches will sprout from the vicinity of the cut end.

The best time to prune is mid-December thru mid-March. All pruning should consist of clean cuts by pruners or saw. Branches that are broken roughly off require a terrific amount of energy to heal. It has been estimated that a ragged break requires more energy to heal than would be required to grow an eight-foot branch. Breaking down of the trees in the wild by vandals has done more to kill Holly than any other cause. Our woods are spotted with Hollies that are little but a dying mass of scars. These same trees would today be beautiful specimens if the branches had been cut clean with saw or pruners. In our orchards here, there are many trees which have been cut heavily each year for thirty years, and yet which, each year, produce as much as three hundred pounds of cut Holly per tree.

INFORMATION ABOUT BERRIES; MALE AND FEMALE HOLLIES.

There are both male (pollen-bearing) and female (berry-bearing) Hollies. Pollination is accomplished by insects, mostly by bees. Lone Hollies sometimes miles from others of their kind, have been known to bear berries because bees have carried pollen to them. In sections of the country where much Holly has been planted, it is sometimes possible to plant a tree anywhere in town and expect that the bees will accomplish pollination from neighboring trees. The best rule to follow in planting, though, especially with small Hollies, is to be sure that the female trees are planted within sight of a male tree, whether in your yard or a neighboring one. One male to ten or fifteen females is sufficient.

The flower of the female Holly has small whitish petals with a knobby green center. The male flower has the same whitish petals but a yellow pollen center. They are easily recognizable at bloom time; usually early May.

Occasionally people mention to us that they have a Holly which bears tiny green berries that never get large enough to turn red, but which fall off shortly after they form. The truth of the matter is that they have never had berries. The petals have fallen off the flowers, and the green center of the flower has remained on the tree for a few days, and unpollinated, has fallen off also. These flower centers were the "berries" that the people "lost." A male is needed when this situation occurs.

People often inquire at what age their Holly should begin to bear berries. The best answer is to say that young Hollies are very unpredictable. If you were to own a hundred trees of one variety, you might find that only about thirty out of a hundred of them bore berries each year, if they were between the ages of two and twelve. Mature Hollies of twelve to sixteen years of age bear steadily year after year. Younger Hollies bear more steadily in a direct ratio to their health. It seems to be the prime duty of a young tree to GROW, and secondarily to bear berries. If young trees are underfed or neglected, they are therefore less likely to bear. Older Hollies, on the other hand, will bear whether poorly fed or not. Berries seem to be more important to a Holly than growth ONLY after they have matured.

Hollies do equally well in sun or shade but generally bear more berries in the sun. The foliage is often more attractive in the shade. Light shade seldom affects bearing. Lots of water during the growing season seems to increase the yield.

COMMERCIAL GROWING OF HOLLY

Hollies are seldom grown from seed because the young seedlings do not bloom for at least eight years. It is thus impossible to tell male from female. The habit of growth of a seedling is unpredictable also, and many may have hereditary leaf discolorations, poor bearing habits, etc.

Grafted Hollies usually are avoided in that a graft consists of a twig from a good Holly parent grafted on the root of a wild Holly and, as the wild Holly root often is vigorous enough to send out foliage which blends with and overshadows the good Holly grafted thereon, few growers practice the method.

Rooted cuttings have proved very successful and the method is widely used throughout the nation. Rooted cuttings (twigs) taken from a superior parent will grow up with the identical leaf, sex, and root characteristics of the parent, as well as the same general trunk structure.

Cuttings are generally taken in August, as they are most easily rooted at that time. The cut twigs have their bottom leaves removed, then the bared stem is treated in hormone solution to hasten rooting. The prepared cutting is placed in sand for several months until it is well rooted. At potting time the cuttings are removed from the sand and those which have rooted the best are potted carefully in small three-inch pots or bands. A

potting mixture of pure leafmold is often used, although some growers prefer mixtures of sand, leafmold and earth. These potted cuttings will not grow any foliage until the following spring, and look for all the world like a couple of leaves placed in a pot. When they have attained a full year's growth during the following summer, they are all of eighteen months old and ready for their first age of sale. Much watering, weeding and "fussing over" have gone on in between.

The next stage of growth finds the baby Hollies in larger pots or in coldframes or beds. They are generally left there for two years and then moved either into field rows or, if destined for plant market sale, are planted in wire baskets full of leafmold. They may be so grown in the basket until they are five or six feet high; then, because of the large size of the root, they must be planted out in the fields. Very often a "well" is dug for each tree, and pure leafmold is placed in this "well" all around the roots of the tree. When dug again, few roots have strayed beyond the leafmold, and the tree hardly knows it has been moved.

Trees spaced wide apart are often allowed to grow up into orchards with an eye to the Christmas cut Holly trade.

GROWING HOLLY ORCHARDS FOR CHRISTMAS GREENS

Selection of the orchard location is important. Orchards planted too far north will be slow in reaching commercial harvesting age. Orchards planted too far south often grow so rapidly that the cut foliage is "stringy" and unattractive. As the berries are formed first in the growing period, too warm a climate causes a tremendous amount of un-berried wood to grow beyond the berries. This overbalanced type of foliage commands a very low price in the markets.

Water table height and frost incidence are also very important. In any area, Hollies which can put their roots down and reach water will grow with twice the vigor and color of those which often become dry during the growing season. Areas which do not normally grow good fruit crops also often fail to grow good Holly berry crops because the late spring frosts freeze the bloom. As Holly generally blooms in May, areas with frosts common to this month should be avoided.

Holly orchards are often considered costly to set out, as trees of at least a two-foot height should be used. Many orchardists lessen the original cost by buying one-year old trees. They then grow these little trees for several years in a well tended coldframe. This method is much more economical and fun, too. Holly orchards are very profitable when bearing, but are a long range project. Usually twelve to sixteen years are required before the first really profitable Holly crop is harvested. Well planted and cared for orchards should yield profitable crops for more than a hundred years. Most orchards are planted either by fathers for their sons, or by businessmen who seek a retirement income and a hobby meantime.

Because of the long range nature of a Holly orchard project, it is of vital importance that good varieties of orchard trees be selected. One of the best ways to insure satisfaction is to visit the nursery where the orchard varieties are grown and to observe the various parent trees. Note whether the sprays lie flat and would box well, whether they are suitable for tips, bouquets, etc. Observe the parent for at least two berrying seasons to determine the quality and quantity of berries that it bears. The offspring will have habits identical to the parent tree. Most orchards are planted to two or three varieties so that if one strain ever misses a year of bearing, the others will likely continue production. This insures against crop failure on any one year and also provides the opportunity to sell boxed Holly under several advertised strains. Some varieties are more popular cut into tips; others to long sprays.

Most orchards are set out spaced either sixteen by sixteen feet, or twenty by sixteen feet. Space is needed between the grown trees so that harvesting, fertilizing, spraying and mowing may be accomplished easily. The trees are usually planted in sour black earth, peat or Oak Leafmold to the extent of at least four bushels to the tree. A bulky fertilizer (such as tobacco stems and old cow manure mixed half and half) is helpful in building up light soils. Periodic applications of fertilizer should follow to maintain dark green foliage. While the Hollies are young and pliable, a pruning program should be undertaken to form them to desired shape. The orchard should be kept in good sod, and mowed when needed during the year.

Returns of forty dollars per year per tree are not uncommon for mature Orchard Hollies. Few occupations are as fascinating or as unexploited. The demand for Holly is far in excess of the supply. Unlike the get-rich-quick schemes of these prosperous times, Holly orcharding requires men with a belief in the future of the nation and with more than the usual patience. To succeed, you must own or buy suitable land, hire a man or men to tend the orchard and must have the hard-headed business ability to see that the work is done right. You must have the faith in yourself that will sustain you during the long period while the trees are growing to maturity. It is an unusual challenge—do you accept it? If you do, you may someday be wealthy.

